**025:250 COMPOSITION: ELECTRONIC MEDIA I**

**Fall 2010**

**Microvariation**

1. Microvariation defined:

a. The term was created by Prof. Fritts for electronic music composition.

b. A digital sound is microvaried when one or more parameters are varied to a small degree.

c. It is most often used when the sound is played more than once in the space of several seconds.

d. It is intended to prevent digital music from sounding mechanical and lifeless.

e. When an acoustical instrument plays a note repeatedly, it does not sound mechanical and lifeless to the same

extent as a digital copy of that note.

2. Use of microvariation:

a. In Pro Tools, it is usually easier to import microvaried sounds than to modify them in the edit window.

b. In Max/MSP, it is usually easier to vary the values of certain parameters of a triggered sound.

3. Which parameters to vary in a microvaried sound:

a. Timing or quantification.

b. Loudness.

c. Envelope.

d. Duration.

e. Pitch.

f. Varispeed.

g. Filter or EQ.

g. Panning.

4. Since creating microvariations entails a certain amoung of time and effort, the composer should try to do as little

as possible in using microvariation to prevent digital sounds from sounding lifeless and mechanical.

a. If a sound is used several times in a work, but more than 10 seconds apart, the microvariation is not needed.

b. If a sound is used as repeated notes, as in 4 or more 16th-notes, then 2-3 microvariations are needed.

c. If more than 4 repeated notes are used in a short period of time, then 3-4 microvariations are needed.

d. No more than 4-5 microvariations should ever be needed in a composition. If they are, then it becomes a

compositional issue.

5. Examples of microvariation

A.AcousticalRepeat

B.Timing Variation +/- 20 ms

C.Timing Variation +/- 100 ms

D.Gain Variation +/- 10%

E.Gain Variation +/- 20%

F.Attack Variation 0-20 ms fade in

G.Varispeed +/- 10 cents

Also: Pan